



3.5 HDD DATA SHEET

The Power of Agility for Creative Pro and SME NAS Enclosures



IronWolf[™] Pro is designed for everything business NAS. Get used to tough, ready, and scalable 24×7 performance that can handle multidrive environments across a wide range of capacities.



Best-Fit Applications

- Commercial and enterprise network-attached storage (NAS)
- 1- to 24-bay network attached storage (NAS)
- Backup, archiving, and disaster recovery
- On-premise private cloud
- Virtual storage



Key Advantages

Optimized for NAS with AgileArray[™]. AgileArray enables dual-plane balancing and RAID optimization in multi-bay environments, with the most advanced power management possible.

Actively protect your NAS with IronWolf Health Management focusing on prevention, intervention, and recovery.¹

High performance means no lag time or downtime for users during workload traffic for the NAS. Seagate leads the competition with the highest-performing NAS drive portfolio.²

Seagate[®] **Rescue Data Recovery.**³ IronWolf Pro comes with extra peace of mind for any mechanical, accidental, or natural disaster. With a 90% success rate of in-house recovery, Seagate has your back with a 2-year included Rescue Data Recovery plan.

Rotational Vibration (RV) sensors. First in its class of drives to include RV sensors to maintain high performance in multi-drive NAS enclosures.³

Range of capacities up to 16TB. More capacity options means more choices that will fit within the budget. Seagate provides a scalable solution for any NAS use-case scenario.

Do more in multi-user environments. IronWolf provides a workload rate of 300TB/year. Multiple users can confidently upload and download data to the NAS server, knowing IronWolf can handle the workload, whether you are a creative professional or a small business.

Designed for always on, always accessible 24×7 performance. Access data on your NAS any time, remotely or on site.

1.2M hours MTBF, 5-year limited warranty represents an improved total cost of ownership (TCO) over desktop drives with reduced maintenance costs.

1 Contact your Seagate sales representative for further information.

2 Performance may vary depending on user's hardware configuration and operating system.

3 Registration required to activate. Rescue recovery services not available in all countries. Contact your Seagate sales representative for further details.





Specifications	16TB	14TB	12TB	10TB	8TB
Capacity	16TB	14TB	12TB	10TB	8TB
Standard Model Number ¹	ST16000NE000	ST14000NE0008	ST12000NE0008	ST10000NE0008	ST8000NE001
Interface	SATA 6Gb/s				
Features					
Drive Bays Supported	Up to 24-bay				
Multi-User Technology (TB/yr)	300	300	300	300	300
Rotational Vibration (RV) Sensors	Yes	Yes	Yes	Yes	Yes
Hot-Plug Support ²	Yes	Yes	Yes	Yes	Yes
Cache (MB)	256	256	256	256	256
Reliability/Data Integrity					
Mean Time Between Failures (MTBF, hours)	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Reliability Rating @ Full 24×7 Operation (AFR)	0.73%	0.73%	0.73%	0.73%	0.73%
Nonrecoverable Read Errors per Bits Read, Max	1 per 10E15				
Power-On Hours per Year (24×7)	8760	8760	8760	8760	8760
Sector Size (Bytes per Logical Sector)	512E	512E	512E	512E	512E
Rescue Services ³	Yes	Yes	Yes	Yes	Yes
Limited Warranty (years)	5	5	5	5	5
Performance					
Spindle Speed (RPM)	7200	7200	7200	7200	7200
Interface Access Speed (Gb/s)	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5
Max. Sustained Transfer Rate OD (MB/s)	250MB/s	250MB/s	250MB/s	214MB/s	214MB/s
Average Latency (ms)	4.16	4.16	4.16	4.16	4.16
Interface Ports	Single	Single	Single	Single	Single
Rotational Vibration @ 10-1500 Hz (rad/s ²)	12.5	12.5	12.5	12.5	12.5
Power Consumption					
Startup Current, Typical (12V, A)	2.0	2.0	2.0	2.0	2.0
Idle Power, Average (W)	5.0	5.0	5.0	5.0	7.06
Average Operating Power (W)	7.6W	7.6W	7.8W	7.8W	9.2W
Standby Mode (W)	1.0	1.0	1.0	0.8	1.0
Sleep Mode (W)	1.0	1.0	1.0	0.8	1.0
Power Supply Requirements	+12 V and +5 V				
Environmental/Temperature					
Operating (ambient, min °C)	5	5	5	5	5
Operating (drive case, max °C)	60	60	60	60	60
Nonoperating (ambient, min °C)	-40	-40	-40	-40	-40
Nonoperating (ambient, max °C)	70	70	70	70	70
Environmental/Acoustics					
Vibration, Nonoperating: 10Hz to 500Hz (Grms)	2.27	2.27	2.27	2.27	2.27
Idle (typical) ³	2.8bels	2.8bels	2.8bels	2.8bels	1.8bels
Seek (typical)	3.2bels	3.2bels	3.2bels	3bels	2.8bels
Environmental/Shock					
Shock, Operating 2ms (Read/Write) (Gs)	50/50Gs	50/50Gs	50/50Gs	70/40Gs	70/40Gs
Shock, Nonoperating, 1ms and 2ms (Gs)	200	200	200	250	250
Physical					
Height (mm/in)	26.11mm/1.028in	26.11mm/1.028in	26.11mm/1.028in	26.11mm/1.028in	26.11mm/1.028in
Width (mm/in, max)	101.85mm/4.01in	101.85mm/4.01in	101.85mm/4.01in	101.85mm/4.01in	101.85mm/4.01in
Depth (mm/in, max)	146.99mm/5.787in	146.99mm/5.787in	146.99mm/5.787in	146.99mm/5.787in	146.99mm/5.787in
Weight (g/lb)	670g/1.477lb	670g/1.477lb	670g/1.477lb	690g/1.521lb	722g/1.59lb
Carton Unit Quantity	20	20	20	20	20
Cartons per Pallet/Cartons per Layer	40/8	40/8	40/8	40/8	40/8

1 Seagate recommends validating your configuration with your HBA/RAID controller manufacturer to ensure full capacity capabilities.

2 Supports Hot-Plug operation per Serial ATA Revision 2.6 specification.

3 Rescue recovery services not available in all countries. Contact your Seagate sales representative for further details. Register an IronWolf Pro drive to activate your 2-year Rescue plan at seagate.com/register.





Specifications	8TB	6TB	6TB	4TB	4TB
Capacity	8TB	6TB	6TB	4TB	4TB
Standard Model Number ¹	ST8000NE0021	ST6000NE000	ST6000NE0023	ST4000NE001	ST4000NE0025
Interface	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s
Features	-				
Drive Bays Supported	Up to 24-bay	Up to 24-bay	Up to 24-bay	Up to 24-bay	Up to 24-bay
Multi-User Technology (TB/yr)	300	300	300	300	300
Rotational Vibration (RV) Sensors	Yes	Yes	Yes	Yes	Yes
Hot-Plug Support ²	Yes	Yes	Yes	Yes	Yes
Cache (MB)	256	256	256	128	128
Reliability/Data Integrity					
Mean Time Between Failures (MTBF, hours)	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Reliability Rating @ Full 24×7 Operation (AFR)	0.73%	0.73%	0.73%	0.73%	0.73%
Nonrecoverable Read Errors per Bits Read, Max	1 per 10E15	1 per 10E15	1 per 10E15	1 per 10E15	1 per 10E15
Power-On Hours per Year (24×7)	8760	8760	8760	8760	8760
Sector Size (Bytes per Logical Sector)	512E	512E	512E	512E	512E
Rescue Services ³	Yes	Yes	Yes	Yes	Yes
Limited Warranty (years)	5	5	5	5	5
Performance	-				
Spindle Speed (RPM)	7200	7200	7200	7200	7200
Interface Access Speed (Gb/s)	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5
Max. Sustained Transfer Rate OD (MB/s)	214MB/s	214MB/s	214MB/s	214MB/s	214MB/s
Average Latency (ms)	4.16	4.16	4.16	4.16	4.16
Interface Ports	Single	Single	Single	Single	Single
Rotational Vibration @ 10-1500 Hz (rad/s ²)	12.5	12.5	12.5	12.5	12.5
Power Consumption					
Startup Current, Typical (12V, A)	2.0	2.0	2.0	2.0	2.0
Idle Power, Average (W)	8.63	7.06	7.5	5.5	5.45
Average Operating Power (W)	8.78W	8.1W	8.1W	9.0W	8.5W
Standby Mode (W)	0.8	1.0	0.6	1.0	0.6
Sleep Mode (W)	0.8	1.0	0.6	1.0	0.6
Power Supply Requirements	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V
Environmental/Temperature					
Operating (ambient, min °C)	5	5	5	5	5
Operating (drive case, max °C)					
Nononorating (ambient, min °C)	60	60	60	60	60
Nonoperating (ambient, min °C)	60 -40	60 -40	60 -40	60 -40	60 -40
Nonoperating (ambient, min °C) Nonoperating (ambient, max °C)					
	-40	-40	-40	-40	-40
Nonoperating (ambient, max °C)	-40	-40	-40	-40	-40
Nonoperating (ambient, max °C) Environmental/Acoustics	-40 70	-40 70	-40 70	-40 70	-40 70
Nonoperating (ambient, max °C) Environmental/Acoustics Vibration, Nonoperating: 10Hz to 500Hz (Grms)	-40 70 2.27	-40 70 3	-40 70 3	-40 70 3	-40 70 3
Nonoperating (ambient, max °C) Environmental/Acoustics Vibration, Nonoperating: 10Hz to 500Hz (Grms) Idle (typical) ³	-40 70 2.27 1.8bels	-40 70 3 2.7bels	-40 70 3 2.7bels	-40 70 3 2.7bels	-40 70 3 2.7bels
Nonoperating (ambient, max °C) Environmental/Acoustics Vibration, Nonoperating: 10Hz to 500Hz (Grms) Idle (typical) ³ Seek (typical)	-40 70 2.27 1.8bels	-40 70 3 2.7bels	-40 70 3 2.7bels	-40 70 3 2.7bels	-40 70 3 2.7bels
Nonoperating (ambient, max °C) Environmental/Acoustics Vibration, Nonoperating: 10Hz to 500Hz (Grms) Idle (typical) ³ Seek (typical) Environmental/Shock	-40 70 2.27 1.8bels 2.8bels	-40 70 3 2.7bels 2.7bels	-40 70 3 2.7bels 2.7bels	-40 70 3 2.7bels 2.8bels	-40 70 3 2.7bels 2.8bels
Nonoperating (ambient, max °C) Environmental/Acoustics Vibration, Nonoperating: 10Hz to 500Hz (Grms) Idle (typical) ³ Seek (typical) Environmental/Shock Shock, Operating 2ms (Read/Write) (Gs)	-40 70 2.27 1.8bels 2.8bels 70/40Gs	-40 70 3 2.7bels 2.7bels 70/40Gs	-40 70 3 2.7bels 2.7bels 70/40Gs	-40 70 3 2.7bels 2.8bels 70/40Gs	-40 70 3 2.7bels 2.8bels 70/40Gs
Nonoperating (ambient, max °C) Environmental/Acoustics Vibration, Nonoperating: 10Hz to 500Hz (Grms) Idle (typical) ³ Seek (typical) Environmental/Shock Shock, Operating 2ms (Read/Write) (Gs) Shock, Nonoperating, 1ms and 2ms (Gs)	-40 70 2.27 1.8bels 2.8bels 70/40Gs	-40 70 3 2.7bels 2.7bels 70/40Gs	-40 70 3 2.7bels 2.7bels 70/40Gs	-40 70 3 2.7bels 2.8bels 70/40Gs	-40 70 3 2.7bels 2.8bels 70/40Gs
Nonoperating (ambient, max °C) Environmental/Acoustics Vibration, Nonoperating: 10Hz to 500Hz (Grms) Idle (typical) ³ Seek (typical) Environmental/Shock Shock, Operating 2ms (Read/Write) (Gs) Shock, Nonoperating, 1ms and 2ms (Gs) Physical	-40 70 2.27 1.8bels 2.8bels 70/40Gs 250	-40 70 3 2.7bels 2.7bels 2.7bels 70/40Gs 250	-40 70 3 2.7bels 2.7bels 2.7bels 70/40Gs 250	-40 70 3 2.7bels 2.8bels 70/40Gs 300	-40 70 3 2.7bels 2.8bels 70/40Gs 300
Nonoperating (ambient, max °C) Environmental/Acoustics Vibration, Nonoperating: 10Hz to 500Hz (Grms) Idle (typical) ³ Seek (typical) Environmental/Shock Shock, Operating 2ms (Read/Write) (Gs) Shock, Nonoperating, 1ms and 2ms (Gs) Physical Height (mm/in)	-40 70 2.27 1.8bels 2.8bels 70/40Gs 250 26.11mm/1.028in	-40 70 3 2.7bels 2.7bels 2.7bels 70/40Gs 250 26.11mm/1.028in	-40 70 3 2.7bels 2.7bels 2.7bels 70/40Gs 250 26.11mm/1.028in	-40 70 3 2.7bels 2.8bels 70/40Gs 300 26.11mm/1.028in	-40 70 3 2.7bels 2.8bels 70/40Gs 300 26.11mm/1.028in
Nonoperating (ambient, max °C) Environmental/Acoustics Vibration, Nonoperating: 10Hz to 500Hz (Grms) Idle (typical) ³ Seek (typical) Environmental/Shock Shock, Operating 2ms (Read/Write) (Gs) Shock, Nonoperating, 1ms and 2ms (Gs) Physical Height (mm/in) Width (mm/in, max)	-40 70 2.27 1.8bels 2.8bels 70/40Gs 250 26.11mm/1.028in 101.85mm/4.01in	-40 70 3 2.7bels 2.7bels 2.7bels 70/40Gs 250 26.11mm/1.028in 101.85mm/4.01in	-40 70 3 2.7bels 2.7bels 2.7bels 70/40Gs 250 26.11mm/1.028in 101.85mm/4.01in	-40 70 3 2.7bels 2.8bels 70/40Gs 300 26.11mm/1.028in 101.85mm/4.01in	-40 70 3 2.7bels 2.8bels 70/40Gs 300 26.11mm/1.028in 101.85mm/4.01in
Nonoperating (ambient, max °C) Environmental/Acoustics Vibration, Nonoperating: 10Hz to 500Hz (Grms) Idle (typical) ³ Seek (typical) Environmental/Shock Shock, Operating 2ms (Read/Write) (Gs) Shock, Nonoperating, 1ms and 2ms (Gs) Physical Height (mm/in) Width (mm/in, max) Depth (mm/in, max)	-40 70 2.27 1.8bels 2.8bels 2.8bels 70/40Gs 250 26.11mm/1.028in 101.85mm/4.01in 146.99mm/5.787in	-40 70 3 2.7bels 2.7bels 2.7bels 70/40Gs 250 26.11mm/1.028in 101.85mm/4.01in 146.99mm/5.787in	-40 70 70 3 2.7bels 2.	-40 70 70 3 2.7bels 2.8bels 2.8bels 70/40Gs 300 26.11mm/1.028in 101.85mm/4.01in 146.99mm/5.787in	-40 70 70 3 2.7bels 2.8bels 2.8bels 70/40Gs 300 26.11mm/1.028in 101.85mm/4.01in 146.99mm/5.787in

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2 Supports Hot-Plug operation per Serial ATA Revision 2.6 specification.

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Specifications	2TB			
Capacity	2TB			
Standard Model Number ¹	ST2000NE0025			
Interface	SATA 6Gb/s			
Features				
Drive Bays Supported	Up to 24-bay			
Multi-User Technology (TB/yr)	300			
Rotational Vibration (RV) Sensors	Yes			
Hot-Plug Support ²	Yes			
Cache (MB)	128			
Reliability/Data Integrity				
Mean Time Between Failures (MTBF, hours)	1,200,000			
Reliability Rating @ Full 24×7 Operation (AFR)	0.73%			
Nonrecoverable Read Errors per Bits Read, Max	1 per 10E15			
Power-On Hours per Year (24×7)	8760			
Sector Size (Bytes per Logical Sector)	512			
Rescue Services ³	Yes			
Limited Warranty (years)	5			
Performance				
Spindle Speed (RPM)	7200			
Interface Access Speed (Gb/s)	6.0, 3.0, 1.5			
Max. Sustained Transfer Rate OD (MB/s)	195MB/s			
Average Latency (ms)	4.16			
Interface Ports	Single			
Rotational Vibration @ 10-1500 Hz (rad/s ²)	12.5			
Power Consumption				
Startup Current, Typical (12V, A)	2.0			
Idle Power, Average (W)	4.61			
Average Operating Power (W)	6.5W			
Standby Mode (W)	0.8			
Sleep Mode (W)	0.8			
Power Supply Requirements	+12 V and +5 V			
Environmental/Temperature				
Operating (ambient, min °C)	5			
Operating (drive case, max °C)	60			
Nonoperating (ambient, min °C)	-40			
Nonoperating (ambient, max °C)	70			
Environmental/Acoustics				
Vibration, Nonoperating: 10Hz to 500Hz (Grms)	3			
Idle (typical) ³	2.2bels			
Seek (typical)	2.6bels			
Environmental/Shock				
Shock, Operating 2ms (Read/Write) (Gs)	70/40Gs			
Shock, Nonoperating, 1ms and 2ms (Gs)	300			
Physical				
Height (mm/in)	26.11mm/1.028in			
Width (mm/in, max)	101.85mm/4.01in			
Depth (mm/in, max)	146.99mm/5.787in			
Weight (g/lb)	550g/1.21lb			
Carton Unit Quantity	20			
Cartons per Pallet/Cartons per Layer	40/8			
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1 Seagate recommends validating your configuration with your HBA/RAID controller manufacturer to ensure full capacity capabilities.

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seagate.com

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